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Author: **Holly Wheeler-Benson**

A Department of Energy
Environmental Cleanup Program

Environmental Restoration Project
Quality Procedure

for:

Identification, Documentation, and Reporting of Newly Discovered Potential Release Sites

Los Alamos
NATIONAL LABORATORY
Los Alamos, New Mexico 87545

Identification, Documentation, and Reporting of Newly Discovered Potential Release Sites

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List of Acronyms and Abbreviations

AA	administrative authority
AOC	area of concern
DOE	Department of Energy
DOE-LAAO	Department of Energy-Los Alamos Area Office
ER	environmental restoration
FAPL	Focus Area Project Leader
FIMAD	Facility for Information Management, Analysis, and Display
FM	Facility Manager
FU	field unit
GIS	geographical information system
IM	Information Management (ER Project focus area)
NMED	New Mexico Environment Department
OU	operable unit
PRS	potential release site
QP	quality procedure
RCRA	Resource Conservation and Recovery Act
RFI	RCRA facility investigation
RPF	Records Processing Facility
SWMU	solid waste management unit
TA	technical area

Identification, Documentation, and Reporting of Newly Discovered Potential Release Sites

NOTE: Environmental Restoration (ER) Project personnel may produce paper copies of this procedure printed from the controlled-document electronic file located at http://erinternal.lanl.gov/documents/Procedures/qps.htm. However, it is their responsibility to ensure that they are trained to and utilizing the current version of this procedure. The author may be contacted if text is unclear.

1.0 PURPOSE

This quality procedure (QP) states the responsibilities and describes the process whereby new solid waste management units (SWMUs) are identified, verified, reported, and initially documented. This procedure also states the process for identifying and documenting new areas of concern (AOCs) (hereinafter, SWMUs and AOCs are also referred to as potential release sites [PRSs]).

Note: This QP supercedes the ER Project administrative procedure AP-04.1, Identification, Documentation, and Reporting of Newly Discovered Potential Release Sites for the Environmental Restoration Program.

2.0 DEFINITIONS

2.1 *Administrative authority (AA)* — The New Mexico Environment Department, the US Environmental Protection Agency, or the US Department of Energy, as appropriate.

2.2 *Area of concern* — An area at Los Alamos National Laboratory (Laboratory) that might warrant further investigation for releases based on past facility waste-management activities.

2.3 *Cartographic Laboratory* — A work element of the Facility for Information Management, Analysis, and Display (FIMAD) that provides for geographical information system (GIS) services in response to ER Project work requests. These GIS services include database creation, data entry, spatial data manipulation and analysis, and display generation.

2.4 *Facility for Information Management, Analysis, and Display* — The ER Project's GIS. The GIS is a computer system designed to allow users to collect, manage, and analyze large volumes of spatially referenced and associated-attribute data and is used for decision support, planning, and management and also for solving complex research.

2.5 *Installation Work Plan (IWP)* — A document that is prepared in accordance with Module VIII of the Laboratory's Hazardous Waste Facility Permit and is

revised annually to reflect the current status of the ER Project. An updated list of all PRSs is included in Appendix B of the IWP.

2.6 *Operational focus area* — An operational focus area includes teams that are responsible for characterization, stabilization, and remediation (if deemed necessary) of PRSs. Each team addresses PRSs of similar type or PRSs located in similar geographic locations with corresponding technical issues.

2.7 *Potential release site* — A potentially contaminated site at the Laboratory that is identified either as a SWMU or an AOC. The term PRS refers to SWMUs and AOCs collectively.

2.8 *PRS database* — The PRS database is an electronic system maintained by the ER Project Office that contains current status information on each PRS. The system is the official list of all ER Project PRSs either active or inactive and contains each PRS's current status in Module VIII of the Laboratory's Hazardous Waste Facility Permit.

2.9 *Solid waste* — As defined in the Resource Conservation and Recovery Act (RCRA), solid waste is any garbage, refuse, sludge (from a wastewater treatment plant, water supply treatment plant, or air pollution control facility), or other discarded material including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities.

Note: Source, by-product, and special nuclear materials in solid physical form waste as defined in the Atomic Energy Act is not regulated by RCRA or the New Mexico Solid Waste Management Regulations.

2.10 *Solid waste management unit* — Any discernible unit at which solid wastes have been placed at any time, regardless of whether the unit was intended for the management of solid or hazardous waste. Such units include any area, at or around the Laboratory, where solid wastes have been routinely and systematically released. This definition includes regulated units (i.e., landfills, surface impoundments, waste piles, and land treatment units) but does not include passive leakage or one-time spills from production areas and units in which wastes have not been managed (e.g., product storage areas). Each SWMU bears a unique alphanumeric identifier keyed to the technical area (TA) in which it is located.

2.11 *SWMU Report* — The 1990 SWMU Report (LANL 1990, 7511.1, 7512.1, 7513.1 and 7514.1) is a hard copy compilation of information including, but not limited to, locations of PRSs and their possible contaminants.

3.0 RESPONSIBLE PERSONNEL

The following personnel are responsible for activities identified in Section 4.0 of this procedure.

3.1 PRS Database Manager — The PRS database and the FIMAD database will be coordinated and maintained by interactions between the PRS Database Manager and the FIMAD Spatial Database Administrator. The PRS Database Manager will periodically transfer data on the regulatory status of PRSs to FIMAD from the PRS database. The PRS Database Manager is responsible for

- managing the PRS database by maintaining the status and pertinent information relative to all PRSs,
- providing PRS identifier numbers (Attachment A) to the Regulatory Compliance Focus Area Project Leader (FAPL) for newly identified sites, and
- sending the newly identified PRS numbers to FIMAD.

3.2 Operational FAPL — Operational FAPLs are responsible for working with the Regulatory Compliance FAPL to verify new PRSs in TAs under their direction and ensuring the entry of newly validated data into the FIMAD database.

3.3 Regulatory Compliance FAPL — The Regulatory Compliance FAPL is responsible for

- working with operational FAPLs to perform independent verification of the existence of new PRSs;
- reporting verified SWMUs to the Department of Energy (DOE) and the AA (i.e., New Mexico Environment Department [NMED]);
- coordinating with the Communications and Outreach Team Leader to inform the Laboratory Public Affairs Office when appropriate;
- coordinating with other institutional programs, as appropriate (e.g., Environment, Safety, and Health Division personnel or Facilities Division Solid Waste Office);
- obtaining unique identifiers for PRSs from the PRS Database Manager; and
- compiling an annual summary report of newly identified PRSs.

3.4 FIMAD Spatial Database Administrator— Ensure that the PRS extent is captured at a precision consistent with the accuracy of the data.

4.0 PROCEDURE

4.1 Introduction

Because PRSs may be discovered during the course of groundwater or surface water monitoring, internal or external environmental audits, or other activities, **ER Project personnel** shall verbally report suspicious soil characteristics, odor, and color to the ER Program Manager. The ER Program Manager will ensure that the FAPLs implement this procedure.

4.2 Reporting and Identifying PRSs

The **operational FAPL** initiates the formal reporting of a prospective PRS by completing Part I of the form entitled Potential Release Site Assessment Report (Attachment A). The following information, at a minimum, is to be recorded on Part I of the Potential Release Site Assessment Report:

- the date the prospective PRS was discovered;
- the location of prospective PRS (e.g., TA, non-DOE property type);
- the location of the nearest building or other structure in the area on a site-specific map;
- the description of the prospective PRS;
- the potential waste types and suspected constituents;
- the names of individuals and contact numbers able to provide additional information; and
- whether it is known if there has been a routine or systematic release at the site.

Note: The compiled information must be sufficient to determine if the site should be identified as a SWMU or AOC by the ER Project.

4.3 Evaluating Potential Release Site Assessment Reports

4.3.1 The **operational FAPL** works with the **Regulatory Compliance FAPL** to determine if the site has already been reported by comparing the completed Potential Release Site Assessment Report to the current PRS database.

4.3.2 If listed, the **Regulatory Compliance FAPL**

- completes Part II of the Potential Release Site Assessment Report form to document that the reported site is recorded in the SWMU Report or PRS database and
- signs the form and forwards a copy to the operational FAPL and the ER Records Processing Facility (RPF) in accordance with QP-4.4, Record Transmittal to the Records Processing Facility.

4.3.3 If the site is not listed in PRS documentation, the **operational FAPL** coordinates with the appropriate Facility Manager (FM) to

- review historical records that are available to ascertain the activities conducted at the reported site;
- contact individuals identified on Part I of the Potential Release Site Assessment Report to obtain other pertinent information; and
- ensure that the Regulatory Compliance FAPL receives the information reported on Part I of the Potential Release Site Assessment Report and other completed supporting documentation to determine if a site visit is necessary.

4.4 Verifying of SWMUs or AOCs

4.4.1 The **Regulatory Compliance FAPL** reviews the reports and supporting documentation to determine if a site visit is necessary. All site visits will be coordinated with the appropriate FM or point of contact. The Regulatory Compliance FAPL

- works with the operational FAPL to obtain clarification on the documentation submitted, if necessary,
- contacts other appropriate site visitors (e.g., Environment, Safety and Health representative[s]), and
- completes Part III of the Potential Release Site Assessment Report.

When Part III is completed and signed, sufficient information is provided to confirm whether the reported site is a PRS.

4.4.2 The **Regulatory Compliance FAPL** notes any preliminary monitoring performed during the site visit (e.g., rad. screening, health-related assessments) and attaches the documentation of the results to the Potential Release Site Assessment Report.

4.4.3 The **Regulatory Compliance FAPL** forwards all documentation back to the operational FAPL and the ER Project PRS Database Manager.

4.4.4 The **operational FAPL** ensures that geographical location information is provided to FIMAD (refer to Section 4.9) and submits a copy of the documentation to the cognizant FM and another copy to the RPF in accordance with QP-4.4, Record Transmittal to the Records Processing Facility.

4.5 Uniquely Identifying SWMUs or AOCs

4.5.1 If the PRS is determined to be a SWMU, at the request of the Regulatory Compliance FAPL, the **PRS Database Manager** assigns the SWMU a unique numerical identifier.

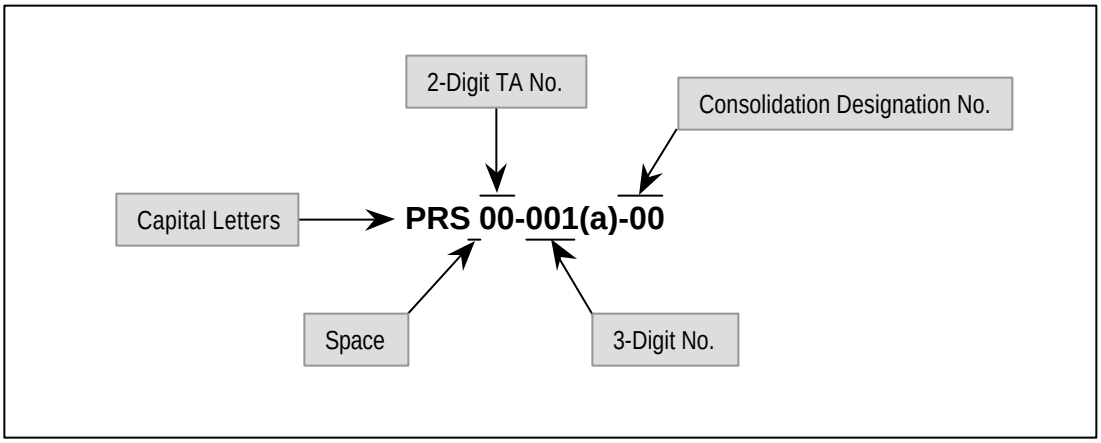


Figure 4.5-1. Proper configuration of a PRS number

A unique SWMU number is assigned in the format "00-001" or "00-001(a)" where

- "00" is always the TA within the Laboratory where the SWMU is located,
- "001" is the sequential number, and
- "(a)" is the designator when multiple SWMUs which have the same description or process reside in a TA.

Where several PRSs have been consolidated, the first PRS number in the group to be consolidated is used as the new consolidation designation number followed by "-00" (or the most current year).

AOCs are assigned a unique numerical identifier in the format "C-00-001" where

- "C" indicates that the PRS is an AOC,
- "00" is the TA where the PRS is located, and
- "001" is the sequential number.

This information is also tracked in the PRS database.

4.5.2 The **Regulatory Compliance FAPL** notes the RCRA Facility Investigation (RFI) Work Plan relative to the proximity of this new PRS by entering the associated operable unit (OU) in Part IV of the Potential Release Site Assessment Report.

4.5.3 The **Regulatory Compliance FAPL** records the assigned PRS number and the associated field unit (FU) in Part IV of the Potential Release Site Assessment Report.

Note: SWMUs and AOCs are listed in the 1990 SWMU Report and are updated annually in Appendix B of the IWP for the ER Project. Current information on SWMUs and AOCs will be documented in the PRS database. The PRS database is available at the ER internal homepage on the Web (at: http://erinternal.lanl.gov/).

4.6 Reporting Newly Identified SWMUs to DOE and NMED

4.6.1 When the PRS has been uniquely identified and confirmed as a SWMU, the **Regulatory Compliance FAPL** prepares a letter to the NMED Hazardous and Radioactive Materials Board (HRMB), in accordance with QP-4.10, Document Development and Approval Process: Peer Review Not Required, that confirms the identification of a newly discovered SWMU.

Note: This letter is signed by the ER Program Manager and the DOE-LAAO Program Manager. DOE-LAAO must receive the letter within five days of completing the checklist in order to ensure their concurrence and to ensure that the written notification is received by the AA within 15 calendar days of discovery.

4.6.2 The **Regulatory Compliance FAPL** compiles a summary report of newly identified SWMUs for inclusion in the annually updated IWP.

4.6.3 The **Regulatory Compliance FAPL** forwards all correspondence received from DOE or NMED concerning the SWMU to the operational FAPL, the Deliverables Tracking and Consistency Team Leader, the ER Project PRS Database Manager, and the appropriate FM.

4.7 Notifying the Laboratory Public Affairs Office

The **Regulatory Compliance FAPL** coordinates with ER's Communication and Outreach Team Leader to notify the Laboratory Public Affairs Office when a SWMU or AOC is confirmed to be on the property of

- a private homeowner,
- Los Alamos County,
- Santa Fe County,
- the U.S. Forest Service,
- a pueblo,
- the Department of the Interior,
- the National Parks Service,
- the Bureau of Land Management, or
- other non-DOE sites.

Note: For SWMUs, this notification is performed in conjunction with reporting requirements described in Section 4.6.

4.8 Maintaining SWMU and AOC Documentation

The **PRS Database Manager** ensures the update of the PRS database when the PRS has been identified as a SWMU or AOC. This is accomplished by summarizing the pertinent information identified on the completed Potential Release Site Assessment Report and entering the information into the PRS database.

4.9 Mapping SWMUs or AOCs

The purpose of mapping PRSs is to delineate the geographic extent of the potential contamination of a site. This facilitates the characterization and remediation of sites and allows information about the PRS and associated data to be easily visualized on a map.

4.9.1 Using the best available information, the **operational FAPL** with assistance from the IM Project Leader identifies the geographic extent of each SWMU or AOC (refer to Attachment B for examples).

4.10 Electronic Capture of PRS Extent

4.10.1 The **operational FAPL** submits a work request to the cartographic laboratory for electronic capture of the PRS extent—based on the information made available by means of Section 4.9. The intent is to capture the PRS outline at a precision consistent with the accuracy of the data. Data accuracy should be commensurate with current knowledge and with the level and degree of contamination.

4.10.2 The **operational FAPL** conveys the delineation of a PRS to the cartographic laboratory in one of three ways.

1) Provide an outline, using a fine line, drawn on a FIMAD map in good condition.
2) Provide an electronic file that contains coordinates of the boundary of the PRS. The coordinate-projection information must accompany the file in some manner. The projection information would include projection name (e.g., State Plane), units (e.g., feet), datum (e.g., NAD83), and depending on the projection, other projection parameters (e.g., zone, central meridian, etc.). Contact FIMAD personnel for assistance with projection information and/or supported formats. The file can be e-mailed or delivered on a 3.5" disk.
3) Provide a description or depiction relative to some known feature in the FIMAD spatial database. For example, a circle, 10-ft in diameter, 20° south and 15° east (specify magnetic or grid north) of the southwest corner of Building G-013; or, a 10-ft buffer around a designated sewer line that exists in the database.

Note: The intent should be to capture the PRS outline at a precision consistent with the accuracy of the data. Data accuracy should be commensurate with current knowledge and with the level and degree of contamination. Contact FIMAD if you have any questions.

5.0 RECORDS

The **Regulatory Compliance FAPL** or the **operational FAPL** is responsible for submitting the following records (processed in accordance with QP-4.4, Record Transmittal to the Records Processing Facility) to the Records Processing Facility.

5.1 Potential Release Site Assessment Report form

5.2 Notification letters to the Department of Energy and New Mexico Environmental Department

5.3 Other supporting documentation

6.0 TRAINING

All users of this QP are trained by self-study, and the training is documented in accordance with QP-2.2, Personnel Orientation and Training.

7.0 ATTACHMENTS

Attachment A: Potential Release Site Assessment Report Form (3 pages)

Attachment B: Example of Mapped SWMU (1 page)

Potential Release Site Assessment Report

Incomplete forms will be returned to the operational FAPL

Part I. Potential ER Site (completed by operational FAPL) Date discovered: _____

Technical Area where potential release site located TA-_____

Engineering structure number: _____ Location of nearest structure: _____

_____

Description of structures and area (e.g., size of drums, surface area, depth): _____

_____

_____

Other supporting information (e.g., indicate historical records referenced, including photographs, personnel to contact, and phone numbers). Identify where information exists:

_____

_____

Was the unit/area that is described above active before November 1988? ☐ Yes ☐ No ☐ Uncertain

State period of operation: from: _____ to: _____

Does the site intersect on private property? ☐ Yes ☐ No ☐ Uncertain (describe): _____

_____

What type of unit or area is the PRS? (Circle one or more options from the list on the following page.)

Are solid wastes known to exist at site? ☐ Yes ☐ No ☐ Unknown

If yes, indicate the waste types by circling one or more of the options provided below:

hazardous high explosive mixed PCBs petroleum product (identify): _____

radioactive sanitary solid unknown _____

List suspected constituent(s), if known: _____

_____

Was there a routine or systematic release? ☐ Yes ☐ No ☐ Unknown

Was this only a one-time release? ☐ Yes ☐ No ☐ Unknown

Is the unit or area used for product storage? ☐ Yes ☐ No If yes, name the product(s) below:

_____ _____

_____ _____

Based on <u>all</u> <u>information</u> <u>provided</u> on this form, the ER PRS is a ☐ SWMU ☐ AOC.

Operational FAPL Signature: _____ Date: _____

Forward to the Regulatory Compliance FAPL to determine if the site was previously reported.

Potential Release Site Assessment Report (continued)

List of PRS Types

aboveground tank	accumulation	bermed area
boneyard	burn site	calibration chamber
caisson	cement plant	chamber
containment area	compressed-gas storage	decontamination facility
drop tower	dry well	evaporator
filter system	firing site	glass breaker
incinerator	injection well	lagoon
landfill	laundry	leach field
manhole*	material disposal area	mortar impact area
off-gas system	open burning	open detonation area
other disposal area: _____		outfall
other disposal system: _____		pit
other structure: _____		recycling unit
resin bed	satellite storage area	septic system
shaft	silver recovery unit	subsurface contamination
storage area: _____		sump
surface disposal	surface impoundment	treatment facility
underground tank	volume-reduction facility	waste line system
wastewater treatment facility		

* Only if it is not part of an existing system that is already designated as a SWMU.

Potential Release Site Assessment Report (continued)

Part II.PRS Reporting Status (completed by the Regulatory Compliance FAPL)

Was the PRS previously reported (i.e., listed in a SWMU Report or the PRS database)?

☐ Yes ☐ No ☐ Uncertain

If yes: PRS No. _____ ☐ No action required*

Regulatory Compliance FAPL Signature: _____ Date: _____

Part III. Independent Verification (completed by the Regulatory Compliance FAPL)

Is a site visit needed? ☐ Yes ☐ No

Date site visited: _____

Visited by: _____ _____

(print name) (phone number) (print name) (phone number)

_____ _____

(print name) (phone number) (print name) (phone number)

Site monitored? ☐ Yes ☐ No If yes, attach signed screening documentation.

☐ Nonconcurrence, no further action required (state reason): _____

_____

Confirmed discovery ☐ SWMU ☐ AOC

Confirmed with modifications to Part I: _____

_____

State action required (and coordinate with C&O Team) and reason for action: _____

_____

Regulatory Compliance FAPL Signature: _____ Date: _____

Part IV. Unique Identifier (completed by the PRS Database Manager)**

SWMU number assigned: _____ Associated FU: _____ Associated OU: _____

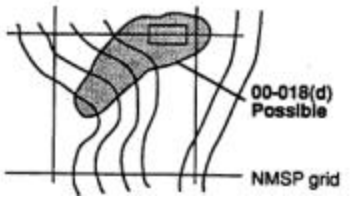
* Send report to the originator and RPF.

** Regulatory Compliance FAPL forwards this form and all appropriate supporting documentation to RPF and the operational FAPL. (This completed form may be used as an attachment to DOE/NMED notification letter.)

Example of a Mapped SWMU

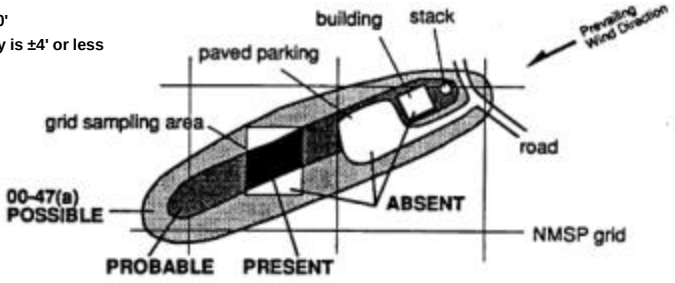
Example 1: The only information available is the maximum possible extent of the contamination. Information is hand-plotted on the base map provided by FIMAD. Digitizing precision is ±2' or less.

Scale 1" = 100'
PRS accuracy is ±2' or less



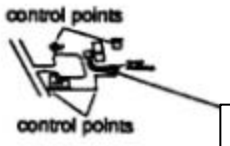
Example 2: More detailed information about soil contamination from stack emission is known. Sampling has positively identified contamination or lack of contamination in some areas. In this case, soil contamination cannot occur where facilities (building, stack, parking lot, road) are located. Digitizing precision is ±4' or less.

Scale 1" = 200'
PRS accuracy is ±4' or less



Example 3: Information available about possible contamination in a sewer line at former building G-013, which is shown on an old engineering drawing without NMSP grid. Digitizing precision is ±10' or less. The person who reported the PRS identified four control points; these are fixed, clear landmarks that exist both on the old drawing and in the present electronic database. This person has also provided a note that explains the nature of the contamination (10' buffer zone) to facilitate digitizing.

Scale 1" = 500'
PRS accuracy is ±10' or less



Note: Contamination is contained in a 10' buffer zone about sewer lines and tank.

Note: 10' precision can be maintained in digitizing this map. However, a larger-scale map is preferable for digitizing.